

# **Decision Document**

**Solid Waste Management Units I03/I04  
Building 104-7 Catchment Pits  
Hawthorne Army Depot  
Hawthorne, Nevada**



**September 1999**



Hawthorne Army  
Depot



US Army Corps  
of Engineers

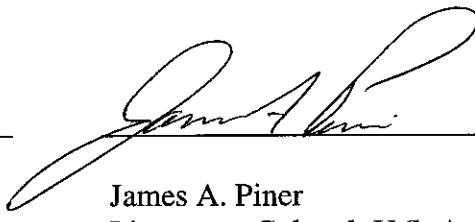
# **Decision Document SWMU I-03/I-04**

September 1999

The selected remedy is protective of human health and the environment. It has been shown that a complete pathway to human health and the environment does not exist, and there is no potential for an exposure pathway to be completed in the future.

**U. S. Army**

21 OCT 1999



James A. Piner  
Lieutenant Colonel, U.S. Army

**State of Nevada**

22 Nov 99



Paul Liebendorfer  
Chief, Bureau of Federal Facilities

# **Decision Document**

**Solid Waste Management Units I03/I04  
Building 104-7 Catchment Pits  
Hawthorne Army Depot  
Hawthorne, Nevada**



**September 1999**



Hawthorne Army  
Depot



**US Army Corps  
of Engineers**

**Decision Document**  
**SWMU I-03/-4, Building 104-7 Catchment Pits**  
**Hawthorne Army Depot**  
**Hawthorne, Nevada**

**1.0 Introduction:**

This decision document describes the rationale for the proposed closure of SWMU I-03/04, Building 104-7 Catchment pits, at the Hawthorne Army Depot (HWAD), Hawthorne, Nevada. This document was prepared by the U.S. Army Corps of Engineers, Sacramento District, HWAD and the Nevada Department of Environmental Protection (NDEP).

Tetra Tech, Inc. (Tt), was tasked by the US Army Corps of Engineers, Sacramento District (USACE), to perform remedial investigations and ground water monitoring at the Hawthorne Army Depot (HWAD), Hawthorne, Nevada. These tasks were conducted from 1993 through 1997, primarily at solid waste management units (SWMUs) designated by the Army and the Nevada Division of Environmental Protection (NDEP). The NDEP is the lead regulatory agency for environmental issues at HWAD. The purpose of the monitoring was to determine the extent and degree of environmental impacts, if any, associated with activities performed at each SWMU. The primary goal of the investigation was to assess the environmental impacts and to report the findings, present conclusions, and recommend any remediation, if necessary.

With guidance from the NDEP, basewide proposed closure goals (PCGs) for soil were established as acceptable levels so that SWMU closure could be recommended and to assist in directing the investigative efforts toward those SWMUs where the target analytes were of greatest concern (Appendix B). These PCGs were used as action levels throughout this investigation and are used for comparison with the detected analytes in this report.

**2.0 Site History**

SWMU I03/04 is in the southern portion of the HWAD's central magazine area, approximately 1,600 feet north of US Highway 95 and approximately 5,000 feet east of the city limits of Hawthorne (Figure 1-1). This SWMU is the site of two former unlined catchment pits northwest of Building 104-7 that were identified on aerial photographs taken in 1980 (EMSL 1981). There is currently no surface evidence of these pits, because the site was washed out during a flash flood in 1991. The USACE, HWAD, and the NDEP agreed to define the boundaries of each SWMU using annotated monuments and survey pins. As part of Tt's 1997 field investigation, a survey monument was constructed and surveyed at SWMU I03/04. A brass survey pin on the monument designates the monument number HWAAP-41-1996 and the SWMU number I03/04.

Two corner pins were set and surveyed to define the SWMU boundary, with the monument as the north corner. The area of the SWMU does not include Building 104-7. The location of these corner markers and the SWMU boundary are shown on Figure 1-2. The survey data for SWMU I03/04 is presented in Appendix A.

### **3.0 Site Conditions**

SWMU I03/04 is mostly devoid of vegetation, apparently from the flood that washed out the area in 1991. There are a few steeply banked drainage channels where the surface consists of sandy and gravelly terrain. No surface evidence was observed that would determine the locations of the two former catchment pits. Soils encountered during Tt's investigation included sand and silt to a depth of 78 feet bgs, with some intermittent layers of gravel and clayey sand. The observations made during the excavations did not reveal the locations of the former catchment pits. An orange layer of soil was observed at a depth of five feet bgs in trench TR01, but no other objects or changes in soil types were observed as the sources of the geophysical anomalies. Using the calculated ground water elevations from the basewide network of monitoring wells; the depth to the shallowest ground water at this SWMU is interpolated to be at a depth of approximately 215 feet bgs.

Based on the reported activities at the adjacent Building 104-7 and the possible releases to the site, the target analytes for the investigations at SWMU I03/04 are metals, explosives (which may have been released for explosives-handling activities), total petroleum hydrocarbons (TPH), and volatile organic compounds (VOCs) as constituents of potential solvent used at Building 104-7.

### **4.0 INVESTIGATIONS**

A site inspection of SWMU I03/04 was conducted by Resource Application, Inc., (RAI) in 1992, previous to this remedial investigation (RAI 1992). During this inspection, no evidence of chemical releases was reported at this SWMU. No investigation activities were conducted during this inspection, and no soil samples were collected from the SWMU at that time. Tt conducted geophysical surveys and a soil gas survey for field reconnaissance and collected surface and subsurface soil samples during the 1994 and 1997 remedial investigations to better define and characterize the extent of any contamination.

Tt's field screening activities during the 1994 and 1997 remedial investigations included geophysical surveys, a soil gas survey, headspace soil sample screening for VOCs in the subsurface soil samples, and explosives and TPH field screening in the surface and subsurface soil samples. During Tt's 1994 remedial investigation of SWMU I03/04, Norcal Geophysical Consultants, Inc., of Petaluma, California, performed surface geophysical surveys. These surveys were conducted at this SWMU to locate subsurface anomalies that may indicate where the former catchment pits were located.

During Tt's 1994 remedial investigation of SWMU I03/04, Target Environmental Services, Inc., (TES) conducted a soil gas survey to screen for VOCs in the near-surface soils. The intent of the soil gas survey was to assess if any areas within the SWMU contained high concentrations of VOCs in the soil gas. All subsurface soil samples were screened using the enzyme immunoassay test kits by USEPA Draft Method 4030 for the semiquantitative analysis of total petroleum hydrocarbons in soil. Eight surface soil samples, including one set of split duplicate samples, were collected. These soil sample locations were selected primarily at areas where surface drainage indicated potential wastewater releases, such as the drain line outfall.

Six sample borings were drilled to total depths from 4.25 feet bgs to ten feet bgs at the boring locations SB01 through SB06 using the CPT sampling technique. Eleven subsurface soil samples, including three collocated duplicate samples, were collected from these borings.

Two trenches (TR01 and TR02) were excavated at SWMU I03/04 to identify and characterize the geophysical anomalies detected that may have been former catchment pits (Figure 3-1). Both of these trenches were 25 feet long. Trench TR01 was excavated to a depth of 14 feet bgs and trench TR02 was excavated to a depth of 10 feet bgs, where native soil was encountered that appeared undisturbed.

## 5.0 Investigation Results

Appendix C indicated the analytical results from the investigations, figure 3-1 shows the location of the samples. Of the 19 soil gas samples contained only two detected VOCs. Soil gas sample I03/04-SG11 contained 1 µg/l of air of DCE, and soil gas sample I03/04-SG17 contained 1.8 µg/l of air of total xylene isomers. None of the other VOC analytes were found in any of the soil gas samples collected at SWMU I03/04.

The two surface soil samples collected at sample location SS01, I03/04-SS01-1-S and the split duplicate sample I03/04-DP117 contained concentrations of TNT (5.5 mg/kg and 2.65 mg/kg) less than TNT's PCG of 64 mg/kg. None of the other eight surface soil samples contained any of the explosives; therefore, only the surface soils in the vicinity of sample location SS01 appear to have been affected with explosives at concentrations less than their PCGs.

Aluminum (2,170 mg/kg to 5,880 mg/kg), arsenic (1 mg/kg to 6.8 mg/kg), barium (31.5 mg/kg to 85 mg/kg), total chromium (1.3 mg/kg to 4.9 mg/kg), and lead (2.1 mg/kg to 5 mg/kg) were found in all of the nine subsurface soil samples collected from the two trenches at this SWMU at concentrations less than their respective maximum expected background concentrations and less than their respective PCGs. No explosives, TPH concentrations, or VOCs were found in any of the subsurface soil samples collected from the trenches at SWMU I03/04; therefore, the subsurface soils at this SWMU I03/04 in the vicinity of the trenches do not appear to be affected by explosives, TPH, or VOCs.

## 6.0 Remediation

No remediation action was required for this site

## **7.0 Remediation Results**

Not applicable

## **8.0 Public Involvement:**

It is the U.S. Department of Defense and Army policy to involve the local community throughout the investigation process at an installation. To initiate this involvement, HWAD has established and maintains a repository library at the local public library. This repository includes final copies of all past studies and other documents regarding environmental issues at HWAD. As future environmental documents are made available to HWAD the repository shall be updated.

HWAD has solicited community participation in establishment of a restoration and advisory board (RAB). To date there has been insufficient response and HWAD has not formed a RAB. HWAD has held open houses to inform the public of on going environmental issues. HWAD continues to solicit community involvement, and will establish a RAB should sufficient community interest be obtained.

## **8.0 Conclusions and Recommendations**

There is no evidence of any of the chemicals of concern at SWMUI03/04 above PCG's.. SWMU I03/04 is recommended to the NDEP for site closure without land use restrictions.

## **10.0 REFERENCES**

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- NDEP. October 1998. Letter to HWAD. Draft Remedial Investigation reports, Solid Waste Management Units I13, A08, H04, J12, and I03/04.
- Resource Application Inc. (RAI) 1992. Site Screening Inspection for the Hawthorne Army Ammunition Plant, Hawthorne, NV. Prepared for the U.S. Army Corps of Engineers Toxic and Hazardous Materials Agency by Resource Applications, Inc., Falls Church, VA. December 1992.
- Tetra Tech, Inc. (Tt). 1993. Draft Technical Memorandum for Group B SWMUs, Hawthorne Army Ammunition Plant. November 22, 1993.
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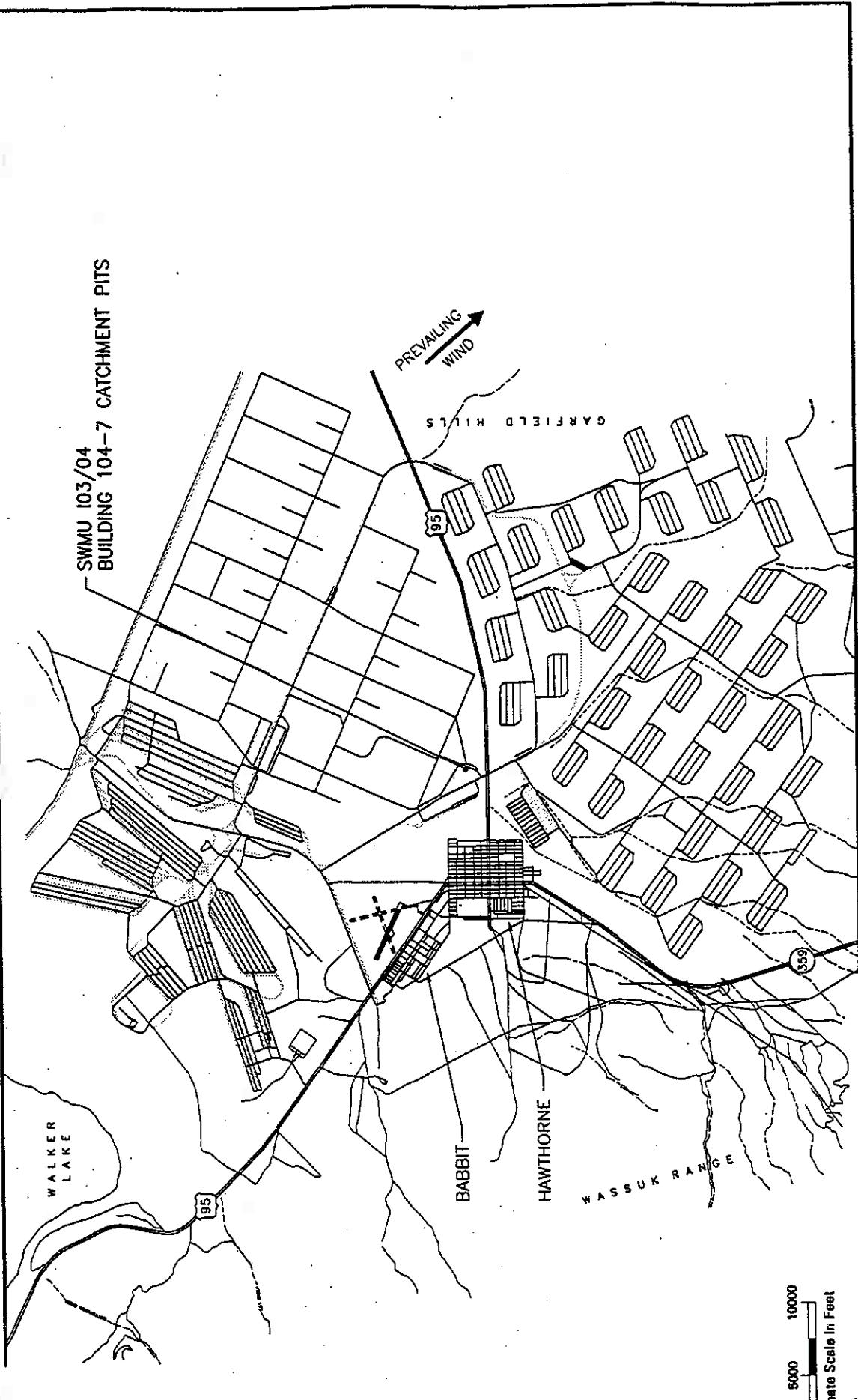
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\_\_\_\_\_. 1995. Risk Assessment Handbook: Volume I Human Health Assessment (EM 200-1-4). USACE. June 1995.

US Environmental Protection Agency (USEPA). 1989. Risk Assessment Guidance for Superfund. Volume I Human Health Evaluation Manual (Part A). December 1989.

\_\_\_\_\_. 1996. Region IX Preliminary Remediation Goals. USEPA Region IX. August 1996.



**Site Location Map**  
**SWMU 103/04**  
**Building 104-7 Catchment Pits**  
Hawthorne Army Depot  
Hawthorne, Nevada  
**Figure 1-1**

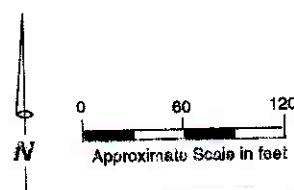
SOURCE: TETRA TECH FINAL DATA PACKAGE, 1996 (REV. 1997)

0 5000 10000  
Approximate Scale In Feet



Legend:

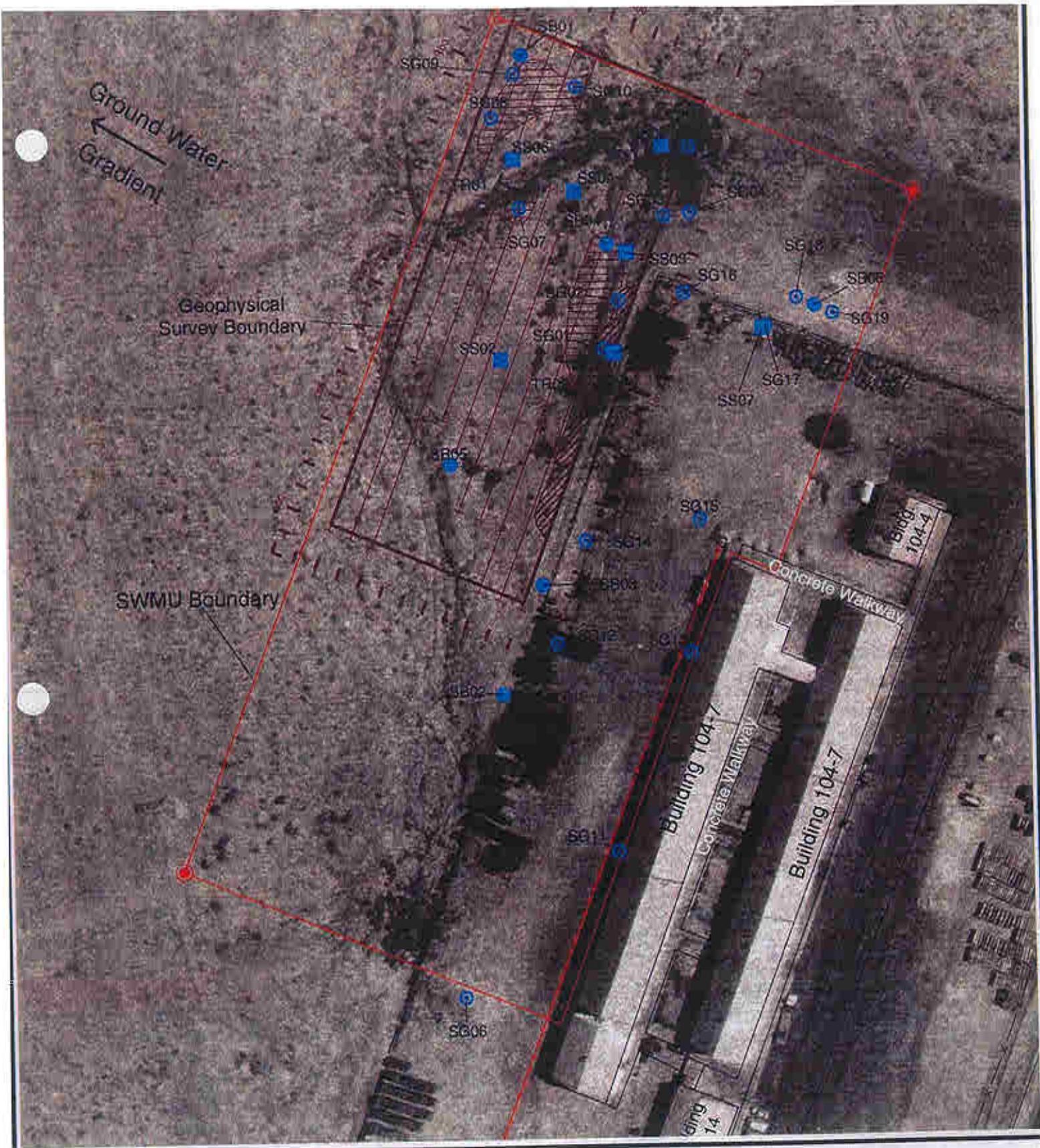
- SWMU Monument
- Boundary Corner Pin
- Fence
- Railroad



**Site Map**  
**SWMU 103/04**  
**NUWES 104-7 Pits**

Hawthorne Army Depot  
Hawthorne, Nevada

**Figure 1-2**



**Legend:**

- |  |                     |  |                      |
|--|---------------------|--|----------------------|
|  | SWMU Monument       |  | Soil Boring Location |
|  | MAG Anomaly         |  | Fence                |
|  | Boundary Corner Pin |  | Railroad             |
|  | EMAG Anomaly        |  | SGPR Anomaly         |
|  | Surface Soil Sample |  | Soil Gas Location    |
|  | Trench Location     |  | SGPR Traverse        |

**Investigation Activity Map  
SWMU 103/04**

**Building 104-7 Pits**

Hawthorne Army Depot  
Hawthorne, Nevada

**Figure 3-1**

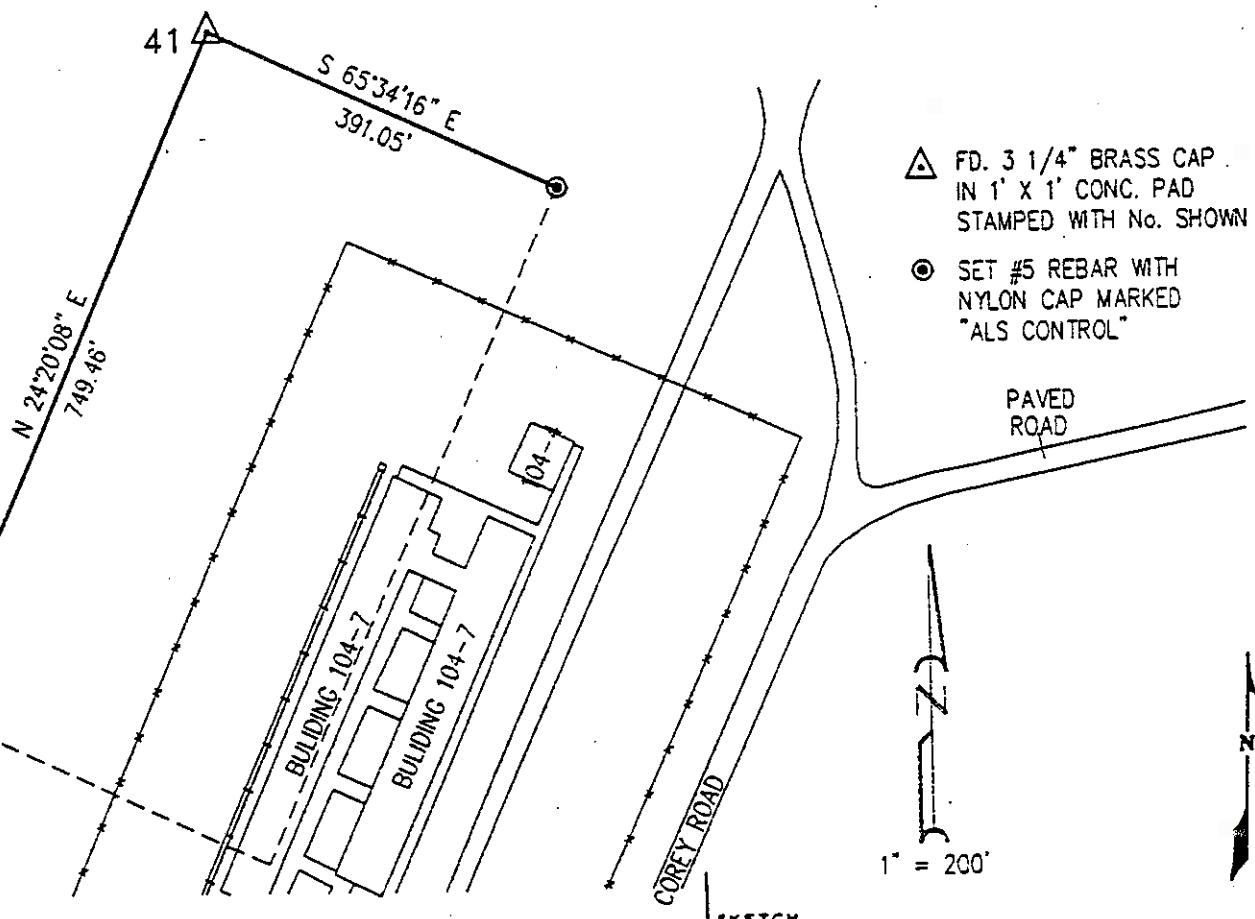
0 80 120  
Approximate Scale in feet

N

## **Appendix A**

COUNTRY <b>USA</b>	TYPE OF MARK <b>BRASS CAP</b>	STATION <b>41</b>	STAMPING ON MARK <b>41 I-3/4</b>	
LOCALITY <b>HAWTHORNE NEV.</b>	STAMPING ON MARK <b>41 I-3/4</b>	AGENCY (CAST IN MARKS) <b>COE HWAAAP</b>	ELEVATION <b>4306.41</b>	(FT) (M)
LATITUDE <b>38°31'48.14743" N</b>	LONGITUDE <b>118°35'49.08786" W</b>	DATUM <b>NAD '27</b>	DATUM <b>NGVD '29</b>	
(NORTHING)(EASTING) <b>1376057.15</b>	(EASTING)(NORTHING) <b>496099.98</b>	GRID AND ZONE <b>NEVADA SP WEST</b>	ESTABLISHED BY (AGENCY) <b>A.L.S.</b>	
(NORTHING)(EASTING) (M) <b>1376057.15</b>	(EASTING)(NORTHING) (M) <b>496099.98</b>	GRID AND ZONE (M)	DATE <b>1997</b>	ORDER <b>Z NO</b>
TO OBTAIN GRID AZIMUTH, ADD		TO THE GEODETIC AZIMUTH		
TO OBTAIN GRID AZ. (ADD/SUB.)		TO THE GEODETIC AZIMUTH		
OBJECT	AZIMUTH OR DIRECTION (GEODETIC)(GRID) (MAGNETIC)	BACK AZIMUTH	GEOD. DISTANCE (METERS)	GRID DISTANCE (METERS)
			(FEET)	(FEET)

MONUMENT 41 - SWMU I-3/4  
 FROM HIGHWAY 95 TAKE MINE ROAD NORTHWEST 600 FEET TO A ROAD, THEN  
 NORTHEAST 1000 FEET TO BUILDING 104-7. SEE MAP BELOW. MONUMENT  
 IS A 3 1/4" BRASS CAP SET IN A 1' X 1' CONCRETE PAD AND IS MARKED  
 WITH A 4" X 4" X 6' WOOD POST, PAINTED WHITE.



SWMU I03/04 Survey Data  
 Hawthorne Army Depot  
 Hawthorne, Nevada

SWMU	Point ID	Northing (feet)	Easting (feet)	Elevation
I03/04	HWAAP-41-1996	1376057.15	496099.48	4306.41
I03/04	Pin 1	1375895.42	496455.52	NE
I03/04	Pin 2	1375374.28	495790.64	NE
I03/04	SB01	1376024.31	496119.71	NE
I03/04	SB02	1375505.30	496075.34	NE
I03/04	SB03	1375592.93	496115.24	NE
I03/04	SB04	1375867.48	496185.91	NE
I03/04	SB05	1375695.60	496039.91	NE
I03/04	SB06	1375808.04	496363.99	NE
I03/04	SG01	1375750.02	496157.27	NE
I03/04	SG02	1375821.27	496193.93	NE
I03/04	SG03	1375887.62	496236.80	NE
I03/04	SG04	1375888.87	496259.40	NE
I03/04	SG05	1375942.08	496261.36	NE
I03/04	SG06	1375258.97	496029.17	NE
I03/04	SG07	1375900.42	496111.51	NE
I03/04	SG08	1375975.14	496091.14	NE
I03/04	SG09	1376009.50	496111.82	NE
I03/04	SG10	1375996.12	496166.14	NE
I03/04	SG11	1375371.02	496169.43	NE
I03/04	SG12	1375544.49	496125.78	NE
I03/04	SG13	1375530.56	496241.36	NE
I03/04	SG14	1375626.79	496154.71	NE
I03/04	SG15	1375639.04	496254.64	NE
I03/04	SG16	1375824.48	496250.89	NE
I03/04	SG17	1375793.48	496320.28	NE
I03/04	SG18	1375815.03	496348.49	NE
I03/04	SG19	1375801.06	496379.49	NE
I03/04	SS01	1375778.78	496187.73	NE
I03/04	SS02	1375801.47	496088.74	NE
I03/04	SS03	1375859.50	496202.28	NE
I03/04	SS04	1375911.44	496160.17	NE
I03/04	SS05	1375944.16	496237.69	NE
I03/04	SS06	1375940.59	496108.25	NE
I03/04	SS07	1375791.74	496317.39	NE
I03/04	TR01	1375922.41	496095.38	NE
I03/04		1375912.83	496117.07	NE
I03/04	TR02	1375769.67	496160.45	NE
I03/04		1375750.02	496151.89	NE

Notes:

NE = Not established.

Coordinate data based on electronic map file using the NAD 1927 datum.

Elevation data based on surveyors map using NGVD 1929 datum.

## **Appendix B**

**Proposed Closure Goals**  
**Hawthorne Army Depot**  
**Hawthorne, Nevada**

Constituent of Concern	Chemical Classification	Carcinogenic (C) or Non-carcinogenic (NC)	HWAD Proposed Closure Goals for Soil (mg/kg)	HWAD Proposed Closure Goal Source
Nitrate	Anion	NC	128,000	Calculated Subpart S <sup>a</sup>
2-Amino-dinitrotoluene	Explosive	NC	-	NA <sup>b</sup>
4-Amino-dinitrotoluene	Explosive	NC	-	NA
1,3-Dinitrobenzene	Explosive	NC	8	Calculated Subpart S
2,4-Dinitrotoluene	Explosive	NC	160	Calculated Subpart S
2,6-Dinitrotoluene	Explosive	NC	80	Calculated Subpart S
HMX	Explosive	NC	4,000	Calculated Subpart S
Nitrobenzene	Explosive	NC	40	Calculated Subpart S
Nitrotoluene (2-, 3-, 4-)	Explosive	NC	800	Calculated Subpart S
RDX	Explosive	NC	64	Calculated Subpart S
Tetryl	Explosive	NC	800	Calculated Subpart S
1,3,5-Trinitrobenzene	Explosive	NC	4	Calculated Subpart S
2,4,6-Trinitrotoluene	Explosive	C	233	Calculated Subpart S
Aluminum	Metal	NC	80,000	Calculated Subpart S
Arsenic (cancer endpoint)	Metal	C & NC	30	Background <sup>c</sup>
Barium and compounds	Metal	NC	5,600	Calculated Subpart S
Beryllium and compounds	Metal	C	1	Background
Cadmium and compounds	Metal	NC	40	Calculated Subpart S
Chromium III and compounds	Metal	NC	80,000	Calculated Subpart S
Lead	Metal	NC	1000	PRG <sup>d</sup>
Mercury and compounds (inorganic)	Metal	NC	24	Calculated Subpart S
Selenium	Metal	NC	400	Calculated Subpart S
Silver and compounds	Metal	NC	400	Calculated Subpart S
Acenaphthene	PAH	NC	4,800	Calculated Subpart S
Benzo[a]anthracene	PAH	C	0.96	Calculated Subpart S
Benzo[a]pyrene	PAH	C	0.10	Detection Limit <sup>e</sup>
Benzo[b]fluoranthene	PAH	C	0.96	Calculated Subpart S
Benzo[k]fluoranthene	PAH	C	10	Calculated Subpart S
Chrysene	PAH	C	96	Calculated Subpart S
Dibenz[ah]anthracene	PAH	C	0.96	Calculated Subpart S
Fluoranthene	PAH	NC	3,200	Calculated Subpart S
Fluorene	PAH	NC	3,200	Calculated Subpart S
Indeno[1,2,3-cd]pyrene	PAH	C	-	NA
Naphthalene	PAH	NC	3,200	Calculated Subpart S
Pyrene	PAH	NC	2,400	Calculated Subpart S
Total Petroleum Hydrocarbons as Diesel (TPH-d)	PAH	C	100	NOEP Level Clean-up <sup>f</sup>
Polychlorinated biphenyls (PCBs)	PCBs	C	25	TSCA <sup>g</sup>
Bis(2-ethylhexyl)phthalate (DEHP)	SVOC	C	1,600	Calculated Subpart S
Bromoform (tribromomethane)	SVOC	C	89	Calculated Subpart S

**Proposed Closure Goals**  
**Hawthorne Army Depot**  
**Hawthorne, Nevada**

Constituent of Concern	Chemical Classification	Carcinogenic (C) or Non-carcinogenic (NC)	HWAD Proposed Closure Goals for Soil (mg/kg)	HWAD Proposed Closure Goal Source
Butyl benzyl phthalate	SVOC	NC	16,000	Calculated Subpart S
Dibromochloromethane	SVOC	C	83	Calculated Subpart S
Diethyl-phthalate	SVOC	NC	8,000	Calculated Subpart S
Diethyl phthalate	SVOC	NC	64,000	Calculated Subpart S
Phenanthrene	SVOC	NC	-	NA
Phenol	SVOC	NC	48,000	Calculated Subpart S
Acetone	VOC	NC	800	Calculated Subpart S
Anthracene	VOC	NC	24,000	Calculated Subpart S
Benzene	VOC	C	24	Calculated Subpart S
Bis(2-chloroisopropyl)ether	VOC	C	3,200	Calculated Subpart S
Bromomethane	VOC	NC	112	Calculated Subpart S
Carbon tetrachloride	VOC	C	5	Calculated Subpart S
Chlorobenzene	VOC	NC	1,600	Calculated Subpart S
Chloroform	VOC	C	115	Calculated Subpart S
Chloromethane	VOC	C	538	Calculated Subpart S
Dibromomethane	VOC	C	0.008	Calculated Subpart S
1,2-Dichlorobenzene	VOC	NC	7,200	Calculated Subpart S
1,4-Dichlorobenzene	VOC	C	18,300	Calculated Subpart S
Dichlorodifluoromethane	VOC	C	16,000	Calculated Subpart S
Ethylbenzene	VOC	NC	8,000	Calculated Subpart S
Methylene bromide	VOC	NC	800	Calculated Subpart S
Methylene chloride	VOC	C	4,800	Calculated Subpart S
2-Methylnaphthalene	VOC	-	-	NA
1,1,2,2-Tetrachloroethane	VOC	C	35	Calculated Subpart S
Tetrachloroethylene (PCE)	VOC	C & NC	800	Calculated Subpart S
Toluene	VOC	NC	16,000	Calculated Subpart S
1,1,1-Trichloroethane	VOC	NC	7,200	Calculated Subpart S
Trichloroethylene (TCE)	VOC	C & NC	480	Calculated Subpart S
Trichlorofluoromethane	VOC	NC	24,000	Calculated Subpart S
1,2,3-Trichloropropane	VOC	C	480	Calculated Subpart S
Vinyl chloride	VOC	C	0.37	Calculated Subpart S
Xylene Total (m-, o-, p-)	VOC	NC	160,000	Calculated Subpart S
2,3,7,8-TCDD	Dioxin	C	0.000005	Calculated Subpart S

<sup>a</sup> RCRA 55 FR 30870

<sup>b</sup> Not available

<sup>c</sup> Highest background concentration detected in 50 background soil samples

<sup>d</sup> Smucker, Stanford J. USEPA Region IX, Preliminary Remedial Goals, Second Half, Sep. 1995

<sup>e</sup> Method detection limit for Volatile Organic Compounds by EPA Method 8260 or

<sup>f</sup> Semi-Volatile Organic Compounds analyzed by EPA Method 8270

<sup>g</sup> Nevada Division of Environmental Protection

<sup>h</sup> Cleanup level for PCB spills in accordance with Toxic Substance and Control Act Spill Policy Guidelines 40 CFR 761

## **Appendix C**

Metals  
Method 6010A (APCL)

Sample ID	Location ID	Sample Depth (feet)	Date	g	Aluminum, Total mg/kg	Arsenic, Total mg/kg	Barium, Total mg/kg	Beryllium, Total mg/kg	Chromium, Total mg/kg	Cadmium, Total mg/kg	Lead, Total mg/kg	Nickel, Total mg/kg	Selenium, Total mg/kg	Silver, Total mg/kg
103/04-TR01-1-S	TR01	2/26/97	10	APCL	5880	1	85	<0.018	<0.021	4.9	4	NA	<0.19	<0.074
103/04-TR01-2-S	TR01	2/26/97	10	APCL	4250	1.1	61	<0.018	<0.021	3.5	2.9	NA	<0.19	<0.072
103/04-TR01-3-S	TR01	2/26/97	17	APCL	3310	6.8	31.5	<0.018	<0.021	2.2	2.9	NA	<0.19	<0.071
103/04-TR01-4-S	TR01	3/1/97	4	APCL	3770	2	46.6	<0.018	<0.021	2.6	3.4 <sup>a</sup>	NA	<0.19	<0.073
103/04-TR01-5-S	TR01	3/1/97	7	APCL	4210	1	67.2	<0.018	<0.021	4.5	4.3 <sup>a</sup>	NA	<0.19	<0.072
103/04-TR02-1-S	TR02	3/1/97	6	APCL	4790	3.7	39.2	<0.018	<0.022	2.1	2.4 <sup>a</sup>	NA	<0.2	<0.075
103/04-TR02-2-S	TR02	3/1/97	11	APCL	2170	3.3	36.3	<0.018	<0.021	1.3	2.1 <sup>a</sup>	NA	<0.19	<0.072
103/04-TR02-3-S	TR02	3/1/97	6	APCL	4910	6	62.1	<0.018	<0.022	3	5 <sup>a</sup>	NA	<0.19	<0.075
103/04-TR02-4-S	TR02	3/1/97	11	APCL	3710	2.5	47.5	<0.017	<0.021	2	3.7	NA	<0.18	<0.071
<hr/>														
Analyses		9	9		9	9	9	9	9	9	9	0	9	9
Deletions		9	9		9	0	0	0	0	9	9	0	0	0
Minimum Concentration		2170	1		31.5	0	0	0	1.3	2.1	0	0	0	0
Maximum Concentration		5880	6.8		85	0	0	0	4.9	5	0	0	0	0
<hr/>														
HWAD - PCG		80000	100		2000	1	20	20	100	NE	20	100		
HWAD - PCG Hits		0	0		0	0	0	0	0	0	0	0	0	
Maximum Background Concentration		12365	18.1		447	0.58	1.08	13.76	16.7	0	0	0	0	0
Background Hits		0	0		0	0	0	0	0	0	0	0	0	0

Notes:

NA = Not analyzed.  
NE = Not established.

Mercury  
Method 7471A (APCL)

Sample ID	Location ID	Date	Depth (feet)	Lab	Mercury, Total mg/kg
I03/04-TR01-1-S	TR01	2/26/97	10	APCL	<0.073
I03/04-TR01-2-S	TR01	2/26/97	10	APCL	<0.071
I03/04-TR01-3-S	TR01	2/26/97	17	APCL	<0.07
I03/04-TR01-4-S	TR01	3/1/97	4	APCL	<0.072
I03/04-TR01-5-S	TR01	3/1/97	7	APCL	<0.071
I03/04-TR02-1-S	TR02	3/1/97	6	APCL	<0.074
I03/04-TR02-2-S	TR02	3/1/97	11	APCL	<0.07
I03/04-TR02-3-S	TR02	3/1/97	6	APCL	<0.073
I03/04-TR02-4-S	TR02	3/1/97	11	APCL	<0.07
Analyses					9
Detections					0
Minimum Concentration					0
Maximum Concentration					0
HWAD - PCG					24
HWAD - PCG Hits					0
Maximum Background Concentration					0.108
Background Hits					0

Notes:

NA = Not analyzed.

NE = Not established.

TPH  
Method 8015M (BCA Field)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	TPH (as diesel) mg/kg
I03/04-SB01-1-S	SB01	8/13/94	4	BCA Field	<0.2
I03/04-SB01-2-S	SB01	8/13/94	8.5	BCA Field	<0.2
I03/04-SB02-1-S	SB02	8/13/94	10	BCA Field	<0.2
I03/04-SB03-1-S	SB03	8/13/94	4	BCA Field	<0.2
I03/04-SB04-1-S	SB04	8/13/94	4	BCA Field	<0.2
I03/04-DP187	SB04	8/13/94	4	BCA Field	<0.2
I03/04-SB05-1-S	SB05	8/13/94	4	BCA Field	<0.2
I03/04-SB06-1-S	SB06	8/13/94	4	BCA Field	<0.2
I03/04-SB06-2-S	SB06	8/13/94	7.5	BCA Field	<0.2
I03/04-SS01-1-S	SS01	7/20/94	0	BCA Field	33
I03/04-DP118	SS01	7/20/94	0	BCA Field	16
I03/04-SS02-1-S	SS02	7/20/94	0	BCA Field	<0.2
I03/04-SS03-1-S	SS03	7/20/94	0	BCA Field	<0.2
I03/04-SS04-1-S	SS04	7/20/94	0	BCA Field	<0.2
I03/04-SS05-1-S	SS05	7/20/94	0	BCA Field	<0.2
I03/04-SS06-1-S	SS06	7/20/94	0	BCA Field	<0.2
I03/04-SS07-1-S	SS07	7/20/94	0	BCA Field	<0.2
<hr/>					
Analyses					17
Detections					2
Minimum Concentration					16
Maximum Concentration					33
<hr/>					
HWAD - PCG					100
HWAD - PCG Hits					0

Notes:

NA = Not analyzed.

NE = Not established.

TPH  
Method 8015ME (APCL)

Sample ID	Location ID	Sample Depth		Lab	C11-C22 (Diesel)	C23-C30 (Motor oil)	C31-C40 (Heavy oil)	C8-C10 (Gasoline)	Diesel Fuel
		Date	(feet)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
I03/04-TR01-1-S	TR01	2/26/97	10	APCL	<0.86	<0.39	<0.3	<0.16	NA
I03/04-TR02-3-S	TR02	3/1/97	6	APCL	<0.87	<0.4	<0.3	<0.16	NA
Analyses					2	2	2	2	0
Detections					0	0	0	0	0
Minimum Concentration					0	0	0	0	0
Maximum Concentration					0	0	0	0	0
HWAD - PCG					100	100	100	100	100
HWAD - PCG Hits					0	0	0	0	0

Notes:

NA = Not analyzed.

NE = Not established.

**Explosives  
Method 8090M (BCA Field)**

Notes:  
NA = Not analyzed.  
NE = Not established.

VOCs  
Method 8260 (BCA)

Sample ID	Location ID	Sample Date (feet)	Depth (feet)	$L_{ab}$	mg/kg						
103/04-SB01-1-S	SB01	8/13/94	4	BCA	<0.0004	<0.0006	<0.0004	<0.0002	<0.0008	<0.0002	<0.0004
103/04-SB01-2-S	SB01	8/13/94	8.5	BCA	<0.0004	<0.0006	<0.0002	<0.0002	<0.0006	<0.0002	<0.0004
103/04-SB02-1-S	SB02	8/13/94	10	BCA	<0.0004	<0.0006	<0.0002	<0.0002	<0.0006	<0.0002	<0.0004
103/04-SB03-1-S	SB03	8/13/94	4	BCA	<0.0004	<0.0006	<0.0002	<0.0002	<0.0006	<0.0002	<0.0004
103/04-DP188	SB03	8/13/94	4	BCA	<0.0004	<0.0006	<0.0002	<0.0002	<0.0008	<0.0002	<0.0004
103/04-SB04-1-S	SB04	8/13/94	4	BCA	<0.0004	<0.0006	<0.0002	<0.0002	<0.0008	<0.0002	<0.0004
103/04-SB05-1-S	SB05	8/13/94	4	BCA	<0.0004	<0.0006	<0.0002	<0.0002	<0.0008	<0.0002	<0.0004
103/04-SB06-1-S	SB06	8/13/94	4	BCA	<0.0004	<0.0006	<0.0002	<0.0002	<0.0008	<0.0002	<0.0004
103/04-SB06-2-S	SB06	8/13/94	7.5	BCA	<0.0004	<0.0006	<0.0002	<0.0002	<0.0008	<0.0002	<0.0004
<hr/>											
Analyses		9	9	9	9	9	9	9	9	9	9
Detections		0	0	0	0	0	0	0	0	0	0
Minimum Concentration		0	0	0	0	0	0	0	0	0	0
Maximum Concentration		0	0	0	0	0	0	0	0	0	0
HWAD - PCG	NE	7200	35	NE	NE	NE	NE	NE	7200	NE	NE
HWAD - PCG Hits	NE	0	0	NE	NE	NE	NE	NE	0	0	0
<hr/>											
Notes:											
NA = Not analyzed.											
NE = Not established.											

Notes:  
NA = Not analyzed.  
NE = Not established.

Notes:  
 NA = Not analyzed.  
 NE = Not established.

VOCs  
Method 8260 (BCA)

Sample ID	Location ID	Depth (feet)	Lab	Total Xylylene Isomers							
				trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Toluene	Ethylbenzene	Methylene chloride	Tetrachloroethylene	Dibromochloromethane	Dibromodifluoromethane
103/04-SB01-1-S	SB01	8/13/94	4	BCA	<0.0006	<0.0002	<0.0001	<0.0004	<0.0006	<0.0004	<0.0002
103/04-SB01-2-S	SB01	8/13/94	8.5	BCA	<0.0006	<0.0002	<0.0001	0.007	<0.0006	<0.0004	<0.0002
103/04-SB02-1-S	SB02	8/13/94	10	BCA	<0.0006	<0.0002	<0.0001	<0.0004	<0.0006	<0.0004	<0.0002
103/04-SB03-1-S	SB03	8/13/94	4	BCA	<0.0006	<0.0002	<0.0001	<0.0004	<0.0006	<0.0004	<0.0002
103/04-SB04-1-S	SB03	8/13/94	4	BCA	<0.0008	<0.0002	<0.0001	<0.0004	<0.0006	<0.0004	<0.0002
103/04-DP188	SB04	8/13/94	4	BCA	<0.0006	<0.0002	<0.0001	<0.0002	0.001	0.0007	<0.0002
103/04-SB05-1-S	SB05	8/13/94	4	BCA	<0.0006	<0.0002	<0.0001	<0.0002	<0.0006	<0.0004	<0.0002
103/04-SB06-1-S	SB06	8/13/94	4	BCA	<0.0006	<0.0002	<0.0001	<0.0002	<0.0006	<0.0004	<0.0002
103/04-SB06-2-S	SB06	8/13/94	7.5	BCA	<0.0006	<0.0002	<0.0001	<0.0002	<0.0006	<0.0004	<0.0002
				9	9	9	9	9	9	9	9
Analyses				0	0	0	0	2	0	1	0
Detectors				0	0	0	0	0	0	0	0
Minimum Concentration				0	0	0	0	0.001	0	0.002	0
Maximum Concentration				0	0	0	0	0.007	0	0.002	0
HWAD - PCG	538	NE	83	800	16000	8000	4800	15	16000	160000	NE
HWAD - PCG Hits	0	NE	0	0	0	0	0	0	0	0	NE

Notes:  
NA = Not analyzed.  
NE = Not established.

VOCs  
Method 8260 (BCA)

Sample ID	Location ID	Date	Depth (feet)	Lab	Trichloroethylene		Tetrachloroethylene		Trichloroethene		Vinyl chloride	
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
103/04-SB01-1-S	SB01	8/13/94	4	BCA	<0.001	<0.0001	R	<0.0002				
103/04-SB01-2-S	SB01	8/13/94	8.5	BCA	<0.001	<0.0001	R	<0.0002				
103/04-SB02-1-S	SB02	8/13/94	10	BCA	<0.001	<0.0001	R	<0.0002				
103/04-SB03-1-S	SB03	8/13/94	4	BCA	<0.001	<0.0001	R	<0.0002				
103/04-DP18	SB03	8/13/94	4	BCA	<0.001	<0.0001	R	<0.0002				
103/04-SB04-1-S	SB04	8/13/94	4	BCA	<0.001	0.014	R	<0.0002				
103/04-SB05-1-S	SB05	8/13/94	4	BCA	<0.001	<0.0001	R	<0.0002				
103/04-SB06-1-S	SB06	8/13/94	4	BCA	<0.001	<0.0001	R	<0.0002				
103/04-SB06-2-S	SB06	8/13/94	7.5	BCA	<0.001	<0.0001	R	<0.0002				
Analyses					9	9	9	9				
Detections					0	1	0	0				
Minimum Concentration					0	0.014	0	0				
Maximum Concentration					0	0.014	0	0				
HWAD - PCG					10	24000	24000					
HWAD - PCG Hits					0	0	0	0				

Notes:

NA = Not analyzed.

NE = Not established.

VOCs  
Method 8260A (APCL)

Notes:  
NA = Not analyzed.  
NE = Not established.

VJCs  
Method 8260A (APCI)

Sample ID	Location ID	Depth (feet)	Lab	Sample ID	Location ID	Depth (feet)	Lab	mg/kg							
103/04-TR01-1-S	TR01	2/26/97	10	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004
103/04-TR01-2-S	TR01	2/26/97	10	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004
103/04-TR01-3-S	TR01	2/26/97	17	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004
103/04-TR01-4-S	TR01	3/1/97	4	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004
103/04-TR01-5-S	TR01	3/1/97	7	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004
103/04-TR02-1-S	TR02	3/1/97	6	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004
103/04-TR02-2-S	TR02	3/1/97	11	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004
103/04-TR02-3-S	TR02	3/1/97	6	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004
103/04-TR02-4-S	TR02	3/1/97	11	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004
1,1,1,2-Tetrachloroethane															
1,1,1-Trichloroethane															
1,1,2-Trichloroethene															
1,1-Dichloroethene															
1,1-Dichloropropane															
1,2,3-Trichlorobenzene															
1,2,3-Trichloropropene															
1,2,3-Trichloropropane															

Notes:  
NA = Not analyzed.  
NE = Not established.

VOCs  
Method 8260A (APCI)

Sample ID	Location ID	Depth (feet)	T <sub>a</sub>	Sample Date	mg/kg						
103/04-TR01-1-S	TR01	2/26/97	10	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001
103/04-TR01-2-S	TR01	2/26/97	10	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001
103/04-TR01-3-S	TR01	2/26/97	17	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001
103/04-TR01-4-S	TR01	3/1/97	4	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001
103/04-TR01-5-S	TR01	3/1/97	7	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001
103/04-TR02-1-S	TR02	3/1/97	6	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001
103/04-TR02-2-S	TR02	3/1/97	11	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001
103/04-TR02-3-S	TR02	3/1/97	6	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001
103/04-TR02-4-S	TR02	3/1/97	11	APCL	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001
<b>2-Chlorotoluene</b>											
<b>2,2-Dichloropropane</b>											
<b>1,4-Dichlorobenzene</b>											
<b>1,3-Dichloropropane</b>											
<b>1,3-Dichlorobenzene</b>											
<b>1,3,5-Trimethylbenzene</b>											
<b>1,2-Dichloropropane</b>											
<b>1,2-Dichloroethane</b>											
<b>1,2-Dibromoethane (EDB)</b>											
<b>1,2,4-Trimethylbenzene</b>											
<b>1,2,4-Trichlorobenzene</b>											
<b>Analyses</b>											
<b>Detections</b>											
<b>Minimum Concentration</b>											
<b>Maximum Concentration</b>											
<b>HWAD - PCG</b>											
<b>HWAD - PCG Hits</b>											

Notes:  
 NA = Not analyzed.  
 NE = Not established.

VOCs  
Method 8260A (APCI)

Sample ID	Location ID	Date	Sample Depth (feet)	L <sub>b</sub>	Chloroethane									
					4-Chlorotoluene	4-Isopropyltoluene	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene
103/04-TR01-1-S	TR01	2/26/97	10	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007
103/04-TR01-2-S	TR01	2/26/97	10	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007
103/04-TR01-3-S	TR01	2/26/97	17	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007
103/04-TR01-4-S	TR01	3/1/97	4	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007
103/04-TR01-5-S	TR01	3/1/97	7	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0008
103/04-TR02-1-S	TR02	3/1/97	6	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007
103/04-TR02-2-S	TR02	3/1/97	11	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0008
103/04-TR02-3-S	TR02	3/1/97	6	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007
103/04-TR02-4-S	TR02	3/1/97	11	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007

Analyses  
Detections  
Minimum Concentration  
Maximum Concentration

HWAD - PCG  
HWAD - PCG Hits

Notes:  
NA = Not analyzed.  
NE = Not established.

**VOCS**  
**Method 8260A (APCL)**

Sample ID	Location ID	Sample Date (feet)	Lab	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Dibromochloromethane	Dibromochloropropane	Dibromomethane	Ethylbenzene	Hexachlorobutadiene	Isopropylbenzene	M- <i>p</i> -Xylenes
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
103/04-TR01-1-S	TR01	2/26/97	10 APCL	<0.0002	<0.0003	<0.0002	<0.0001	<0.0002	<0.0005	<0.0001	<0.0002	<0.0002	<0.0005
103/04-TR01-2-S	TR01	2/26/97	10 APCL	<0.0002	<0.0003	<0.0002	<0.0001	<0.0002	<0.0005	<0.0001	<0.0002	<0.0002	<0.0005
103/04-TR01-3-S	TR01	2/26/97	17 APCL	<0.0002	<0.0003	<0.0002	<0.0001	<0.0002	<0.0005	<0.0001	<0.0002	<0.0002	<0.0005
103/04-TR01-4-S	TR01	3/1/97	4 APCL	<0.0002	<0.0003	<0.0002	<0.0001	<0.0002	<0.0005	<0.0001	<0.0002	<0.0002	<0.0005
103/04-TR01-5-S	TR01	3/1/97	7 APCL	<0.0002	<0.0003	<0.0002	<0.0001	<0.0002	<0.0005	u	<0.0001	<0.0002	<0.0005
103/04-TR02-1-S	TR02	3/1/97	6 APCL	<0.0002	<0.0003	<0.0002	<0.0001	<0.0002	<0.0005	u	<0.0001	<0.0002	<0.0005
103/04-TR02-2-S	TR02	3/1/97	11 APCL	<0.0002	<0.0003	<0.0002	<0.0001	<0.0002	<0.0005	<0.0001	<0.0002	<0.0002	<0.0005
103/04-TR02-3-S	TR02	3/1/97	6 APCL	<0.0002	<0.0003	<0.0002	<0.0001	<0.0002	<0.0005	<0.0001	<0.0002	<0.0002	<0.0005
103/04-TR02-4-S	TR02	3/1/97	11 APCL	<0.0002	<0.0003	<0.0002	<0.0001	<0.0002	<0.0005	<0.0001	<0.0002	<0.0002	<0.0005
Analyses				9	9	9	9	9	9	9	9	9	9
Detections				0	0	0	0	0	0	0	0	0	0
Minimum Concentration				0	0	0	0	0	0	0	0	0	0
Maximum Concentration				0	0	0	0	0	0	0	0	0	0
HWAD - PCG				120	538	NE	83	NE	800	16000	8000	NE	160000
HWAD - PCG Hits				0	0	NE	0	NE	0	0	0	NE	0

Notes:  
NA = Not analyzed.  
NE = Not established.

VOCs  
Method 8260A (APCL)

Sample ID	Location ID	Date	Sample Depth (feet)	#	mg/kg	Methylene chloride	mg/kg	MTBE
103/04-TR01-1-S	TR01	2/26/97	10	APCL	<0.0007	<0.0002		
103/04-TR01-2-S	TR01	2/26/97	10	APCL	<0.0007	<0.0002		
103/04-TR01-3-S	TR01	2/26/97	17	APCL	<0.0007	<0.0002		
103/04-TR01-4-S	TR01	3/1/97	4	APCL	<0.0007	<0.0002		
103/04-TR01-5-S	TR01	3/1/97	7	APCL	<0.0007	<0.0002		
103/04-TR02-1-S	TR02	3/1/97	6	APCL	<0.0008	<0.0002		
103/04-TR02-2-S	TR02	3/1/97	11	APCL	<0.0007	<0.0002		
103/04-TR02-3-S	TR02	3/1/97	6	APCL	<0.0008	<0.0002		
103/04-TR02-4-S	TR02	3/1/97	11	APCL	<0.0007	<0.0002		
<b>Analyses</b>								
<b>Detections</b>								
<b>Minimum Concentration</b>								
<b>Maximum Concentration</b>								
<b>HWAD - PCG</b>								
<b>HWAD - PCG Hits</b>								
<b>Notes:</b>								
NA = Not analyzed.								
NE = Not established.								

Notes:  
NA = Not analyzed.  
NE = Not established.

**Explosives**  
**Method 8330 (Datachem)**

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	Analytical Data (mg/kg)										
					1,3,5-Trinitrobenzene	1,3-Dinitrobenzene	2,4,6-Trinitrotoluene	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Nitrotoluene	3-Nitrotoluene	4-Nitrotoluene	HMX	RDX	Tetryl
I03/04-DP119	SS01	7/20/94	0	Datachem	<0.09	<0.04	<0.19	<0.17	<0.46	<0.39	<0.74	<0.21	<0.09	<0.34	<0.19
I03/04-DP189	SB05	8/13/94	4	Datachem	<0.09	<0.04	<0.19	<0.17	<0.46	<0.39	<0.74	<0.21	<0.09	<0.34	<0.19

Analyses	2	2	2	2	2	2	2	2	2	2	2
Detections	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	0	0	0	0	0	0	0	0	0	0	0
Maximum Concentration	0	0	0	0	0	0	0	0	0	0	0
HWAD - PCG	4	8	233	2.6	80	800	800	4000	40	64	800
HWAD - PCG Hits	0	0	0	0	0	0	0	0	0	0	0

Notes:

NA = Not analyzed.

NE = Not established.

Explosives  
Method 8330 (APCL)

Sample ID	Location ID	Depth (feet)	Lab	Nitrobenzene				RDX			
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
103/04-TR01-1-S	TR01	2/26/97	10	APCL	<0.014	<0.027	<0.043	<0.026	<0.06	<0.077	<0.049
103/04-TR01-2-S	TR01	2/26/97	10	APCL	<0.014	<0.026	<0.042	<0.027	<0.058	<0.075	<0.048
103/04-TR01-3-S	TR01	2/26/97	17	APCL	<0.013	<0.028	<0.041	<0.027	<0.058	<0.074	<0.048
103/04-TR01-4-S	TR01	3/1/97	4	APCL	<0.064	<0.035	<0.058	<0.043	<0.047	<0.09	<0.064
103/04-TR01-5-S	TR01	3/1/97	7	APCL	<0.084	<0.035	<0.058	<0.043	<0.046	<0.089	<0.064
103/04-TR02-1-S	TR02	3/1/97	6	APCL	<0.066	<0.036	<0.06	<0.044	<0.048	<0.092	<0.066
103/04-TR02-2-S	TR02	3/1/97	11	APCL	<0.063	<0.034	<0.057	<0.042	<0.046	<0.088	<0.063
103/04-TR02-3-S	TR02	3/1/97	6	APCL	<0.086	<0.036	<0.059	<0.044	<0.048	<0.092	<0.066
103/04-TR02-4-S	TR02	3/1/97	11	APCL	<0.063	<0.034	<0.056	<0.042	<0.045	<0.087	<0.059
Analyses				9	9	9	9	9	9	9	9
Detections				0	0	0	0	0	0	0	0
Minimum Concentration				0	0	0	0	0	0	0	0
Maximum Concentration				4	8	233	2.6	80	800	800	4000
HWAD - PCG				0	0	0	0	0	0	0	0
HWAD - PCG Hits											64

Notes:  
NA = Not analyzed.  
NE = Not established.

Explosives  
Method 8330 (APCL)

Sample ID	Location ID	Date	Depth (feet)	$\frac{g}{kg}$	$\text{Te}^{75}$		mg/kg	mg/kg	mg/kg
					4-Amino-2,6-dinitrotoluene	2-Amino-4,6-dinitrotoluene			
103/04-TR01-1-S	TR01	2/26/97	10	APCL	<0.048	NA	NA	NA	NA
103/04-TR01-2-S	TR01	2/26/97	10	APCL	<0.047	NA	NA	NA	NA
103/04-TR01-3-S	TR01	2/26/97	17	APCL	<0.046	NA	NA	NA	NA
103/04-TR01-4-S	TR01	3/1/97	4	APCL	<0.059	NA	NA	NA	NA
103/04-TR01-5-S	TR01	3/1/97	7	APCL	<0.059	NA	NA	NA	NA
103/04-TR02-1-S	TR02	3/1/97	6	APCL	<0.061	NA	NA	NA	NA
103/04-TR02-2-S	TR02	3/1/97	11	APCL	<0.058	NA	NA	NA	NA
103/04-TR02-3-S	TR02	3/1/97	6	APCL	<0.06	NA	NA	NA	NA
103/04-TR02-4-S	TR02	3/1/97	11	APCL	<0.057	NA	NA	NA	NA
Analyses					9	0	0	0	0
Detections					0	0	0	0	0
Minimum Concentration					0	0	0	0	0
Maximum Concentration					0	0	0	0	0
HWAD - PCG					800	NE	NE	NE	NE
HWAD - PCG Hits					0	NE	NE	NE	NE

Notes:

NA = Not analyzed.

NE = Not established.

Explosives  
Method 8330M (APCL)

Sample ID	Location ID	Date	Sample Depth (feet)	Lab	Picric Acid mg/kg
I03/04-TR01-1-S	TR01	2/26/97	10	APCL	<0.73
I03/04-TR01-2-S	TR01	2/26/97	10	APCL	<0.71
I03/04-TR01-3-S	TR01	2/26/97	17	APCL	<0.7
I03/04-TR01-4-S	TR01	3/1/97	4	APCL	<0.72
I03/04-TR01-5-S	TR01	3/1/97	7	APCL	<0.71
I03/04-TR02-1-S	TR02	3/1/97	6	APCL	<0.74
I03/04-TR02-2-S	TR02	3/1/97	11	APCL	<0.7
I03/04-TR02-3-S	TR02	3/1/97	6	APCL	<0.73
I03/04-TR02-4-S	TR02	3/1/97	11	APCL	<0.7
<hr/>					
Analyses					9
Detections					0
Minimum Concentration					0
Maximum Concentration					0
<hr/>					
HWAD - PCG					NE
HWAD - PCG Hits					NE

Notes:

NA = Not analyzed.

NE = Not established.

RDX Test Kit  
Method 8510 (Tt Field)

Sample ID	Location ID	Date	Depth (feet)	Sample Depth		Lab	RDX	RDX Dup	RDX (Rerun)
							mg/kg	mg/kg	mg/kg
I03/04-TR01-1-S	TR01	2/26/97	10	Tt Field	<0.8		NA	NA	
I03/04-TR01-2-S	TR01	2/26/97	10	Tt Field	<0.8		NA	NA	
I03/04-TR01-3-S	TR01	2/26/97	17	Tt Field	<0.8		NA	NA	
I03/04-TR01-4-S	TR01	3/1/97	4	Tt Field	<0.8		NA	NA	
I03/04-TR01-5-S	TR01	3/1/97	7	Tt Field	<0.8		NA	NA	
I03/04-TR02-1-S	TR02	3/1/97	6	Tt Field	<0.8		NA	NA	
I03/04-TR02-2-S	TR02	3/1/97	11	Tt Field	0.89		NA	NA	
I03/04-TR02-3-S	TR02	3/1/97	6	Tt Field	1.51		NA	NA	
I03/04-TR02-4-S	TR02	3/1/97	11	Tt Field	1.63		NA	NA	
<b>Analyses</b>						9	0	0	
<b>Detections</b>						3	0	0	
<b>Minimum Concentration</b>						0.89	0	0	
<b>Maximum Concentration</b>						1.63	0	0	
<b>HWAD - PCG</b>						64	64	64	
<b>HWAD - PCG Hits</b>						0	0	0	

**Notes:**

NA = Not analyzed.

NE = Not established.

TNT Test Kit  
Method 8515 (Tt Field)

Sample ID	Location ID	Date	Depth (feet)	Lab	2,4,6-TNT		
					mg/kg	mg/kg	mg/kg
I03/04-TR01-1-S	TR01	2/26/97	10	Tt Field	< 0.8	NA	NA
I03/04-TR01-2-S	TR01	2/26/97	10	Tt Field	< 0.8	NA	NA
I03/04-TR01-3-S	TR01	2/26/97	17	Tt Field	< 0.8	NA	NA
I03/04-TR01-4-S	TR01	3/1/97	4	Tt Field	< 0.8	NA	NA
I03/04-TR01-5-S	TR01	3/1/97	7	Tt Field	< 0.8	NA	NA
I03/04-TR02-1-S	TR02	3/1/97	6	Tt Field	< 0.8	NA	NA
I03/04-TR02-2-S	TR02	3/1/97	11	Tt Field	< 0.8	NA	NA
I03/04-TR02-3-S	TR02	3/1/97	6	Tt Field	< 0.8	NA	NA
I03/04-TR02-4-S	TR02	3/1/97	11	Tt Field	< 0.8	NA	NA
<b>Analyses</b>					9	0	0
<b>Detections</b>					0	0	0
<b>Minimum Concentration</b>					0	0	0
<b>Maximum Concentration</b>					0	0	0
<b>HWAD - PCG</b>					233	233	233
<b>HWAD - PCG Hits</b>					0	0	0

Notes:

NA = Not analyzed.

NE = Not established.

## **Appendix D**



I-3/I-4, Pan along center of north fence at Bldg 104-7. #R3-P15/16, 11/3/93



August 1999